

CLAIM AMENDMENTS

Claim 1 (Currently Amended)

A photothermographic material comprising on a support a light-sensitive layer containing a light-insensitive silver salt of an aliphatic carboxylic acid and light-sensitive silver halide grains, a reducing agent for silver ions and a binder,

wherein the silver halide grains comprise an electron trapping dopant capable of trapping an electron inside of the grains,

wherein the dopant is a chalcogen or nitrogen containing organic compound, wherein the dopant is added ~~after~~ at nucleus formation ~~and or~~ during grain growth so ~~that~~ as to incorporate the dopant ~~is~~ inside the ~~silver-halide~~ grains,

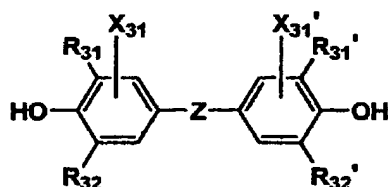
wherein the photothermographic material further comprises a compound represented by the following formula (1), and the photothermographic material meets the following requirement:

$$S_B/S_A \leq 0.2$$

wherein S_A represents a sensitivity obtained when exposed to white light (4874K) for 30 sec. through an optical wedge, and then developed at 110 °C for 15 sec., and S_B represents a sensitivity obtained when subjected to a heat treatment at 110 °C for 15 sec., and exposed to white light (4874K) for 30 sec.

through an optical wedge, and then developed at 110 °C for 15 sec;

formula (1)



wherein Z is -S- or -C(R₃₃)(R₃₃')-, in which R₃₃ and R₃₃' are each a hydrogen atom or a substituent; R₃₁, R₃₂, R₃₁' and R₃₂' are each a substituent; X₃₁ and X₃₁' are each a hydrogen atom or a substituent.

Claim 2 (Original)

The photothermographic material of claim 1, wherein in formula (1), R₃₃ and R₃₃' are each a hydrogen atom, or an alkyl or cycloalkyl group.

Claim 3 (Original)

The photothermographic material of claim 1, wherein in formula (1), at least one of R₃₃ and R₃₃' is a hydrogen atom and the other one is a hydrogen atom, or an alkyl or cycloalkyl group.

Claim 4 (Original)

The photothermographic material of claim 1, wherein in formula (1), R_{31} , R_{32} , R_{31}' and R_{32}' are each an alkyl group, alkenyl group, alkynyl group, cycloalkyl group, cycloalkenyl group, aryl group or heterocyclic group.

Claim 5 (Cancelled)

Claim 6 (Previously Presented)

The photothermographic material of claim 1, wherein the dopant is contained in an amount of 1×10^{-8} to 1×10^{-1} mol per mol of silver.

Claims 7-9 (Cancelled)

Claim 10 (Original)

The photothermographic material of claim 1, wherein the silver halide grains are silver bromide or silver iodobromide.

Claim 11 (Original)

The photothermographic material of claim 1, wherein grains having a grain size of 0.04 to 0.07 μm account for at least 50% by weight of the silver halide gains, based on silver.

Claim 12 (Original)

The photothermographic material of claim 1, wherein the aliphatic carboxylic acid exhibits a melting point of 70 to 90 °C.

Claim 13 (Original)

The photothermographic material of claim 1, wherein the silver salt of an aliphatic carboxylic acid is comprised of grains having an average equivalent circular diameter of 0.05 to 0.8 μm and an average thickness of 0.005 to 0.07 μm .